

REMARKS

The Office Action dated January 9, 2003 has been reviewed and carefully considered. Claims 1-7 remain pending in this case, of which claim 1 is the independent claim. The Examiner's indication of allowable subject matter for claim 6 is appreciated. Reconsideration in view of the following remarks is respectfully requested.

Claims 1 and 5 stand rejected under 35 U.S.C. 103(a) as allegedly unpatentable over "SPIE Proceedings series, 1995" by Ahanger et al. ("Ahanger") in view of U.S. Patent No. 6,389,168 to Altunbasak et al. ("Altunbasak").

Claim 1 recites "A descriptor for the representation . . . of camera motions . . . within any sequence of frames . . . wherein each of said motion types . . . is . . . subdivided into two components that stand for two different directions . . ." Discussion of the inventive technique by which each motion type is "subdivided into two components that stand for" two different directions is found in the specification (page 4, lines 3-5).

Item 4 of the Office Action states that the Ahanger reference shows subdividing in "Figure 1: Basic Camera Operations."

Figure 1 of Ahanger, however, merely shows that certain camera motion types that have two possible directions.

Ahanger makes no disclosure or suggestion whatsoever that a camera motion type is "subdivided into two components that stand for" two different directions. "Subdivision" merely exists in the mind of the Examiner using impermissible hindsight gained from reading the present application.

The Altunbasak reference also fails to disclose or suggest that a camera motion type is "subdivided into two components that stand for" two different directions, and cannot make up for the deficiencies in Ahanger. Claim 1 is believed to be patentable over the cited references for at least this reason.

In addition, as set forth above, claim 1 further specifies "A descriptor for the representation . . . of camera motions . . . within any sequence of frames." As used in claim 1, the expression "any sequence of frames" includes the case of a single frame (See dependent claim 6: "when the window is reduced to a single frame"; see also the specification, page 5, lines 22-24: "single frame"). Consequently, Ahanger fails to disclose or suggest "A descriptor for the representation . . . of camera motions . . . within any sequence of frames." In fact, Ahanger does not even discuss the concept of a descriptor, much less a descriptor for a single frame. Disclosure or suggestion of a "descriptor" of camera motions "within any sequence of frames" exists, again, not in Ahanger, but in the mind of the Examiner using impermissible hindsight gained from reading the present application. Altunbasak also fails to disclose or suggest a "descriptor" of camera motions "within any sequence of frames," and cannot make up for the deficiencies in Ahanger. Accordingly, the proposed combination would not have rendered claim 1 obvious. Reconsideration and withdrawal of the rejection is respectfully requested.

As to claim 5, it depends from base claim 1 which has been shown to be patentable over the applied references and is likewise patentable there over.

Claims 1, 2 and 7 stand rejected under 35 U.S.C. 103(a) as allegedly unpatentable over U.S. Patent No. 5,267,034 to Miyatake et al. ("Miyatake") in view of Altunbasak.

Item 5 of the Office Action states that the Miyatake reference shows subdividing in "Fig. 1, see arrows, e.g.: panning, left or right; and zooming, in or out."

It is unclear what arrows are being referred to, because the only arrows in Fig. 1 are those that show the flow of information between components in the Miyatake camera work detection system.

Nevertheless, if, hypothetically, such arrows showing left/right panning or in/out zooming were to exist in a prior art reference, such hypothetical disclosure would merely serve to show that certain camera motion types have two possible directions.

Referring again to Miyatake, Miyatake averages (col. 9, line 53: "average") motion vectors to detect a type of camera motion (col. 9, line 51), and therefore does not subdivide the type of camera motion. Miyatake fails to disclose or suggest a camera motion type that is "subdivided into two components that stand for" two different directions.

In addition, Miyatake operates by correlating the "displacement between frames" (Summary of the Invention: col. 2, lines 37-38), and does not disclose or suggest a descriptor for a single frame. For at least this reason, Miyatake fails to disclose or suggest "A descriptor for the representation . . . of camera motions . . . within any sequence of frames" as in the invention recited by claim 1.

As set forth above, Altunbasak cannot make up for these deficiencies in Miyatake.

In fact, there would have been no motivation for the proposed combination. To the best of applicant's understanding, item 5 of the Office Action suggests as motivation utilizing an Altunbasak histogram as a "specific tool" in aiding Miyake "to identify such camera operations." Miyake, however, already teaches how to detect camera operations (See, for example, col. 9, lines 50-52 and col. 10, lines 30-32). It is unclear to applicant in what sense the Office Action is alleging Altunbasak technology to be better than Miyake technology, and how the Office Action proposes to modify Miyake to incorporate Altunbasak techniques.

For at least all of the above reasons, the proposed combination would not have rendered claim 1 obvious. Reconsideration and withdrawal of the rejection is respectfully requested.

As to claims 2 and 7, they depend from base claim 1 and are likewise deemed to be patentable over the applied references.

Claims 3-4 stand rejected under 35 U.S.C. 103(a) as unpatentable over Miyatake in view of Altunbasak and U.S. Patent No. 5,929,940 to Jeannin ("Jeannin").

Claims 3 and 4 depend from base claim 1. Jeannin is directed to estimating motion between segmented images, but cannot make up for the deficiencies in Miyatake and Altunbasak. Claims 3 and 4 are accordingly deemed to be non-obvious over the applied references. Reconsideration and withdrawal of the rejection is respectfully requested.

Claim 6 was objected to as dependent upon a rejected base claim, claim 1, but was deemed by the Examiner to be allowable if redrafted into independent form. Having shown above that claim 1 is allowable, dependent claim 6 is likewise allowable.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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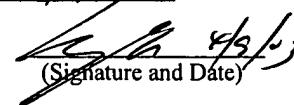
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